

REMARKS

Claims 1-24 are pending in the application. Favorable reconsideration in light of the Terminal Disclaimer and the remarks which follow is respectfully requested.

The Indefiniteness Rejection

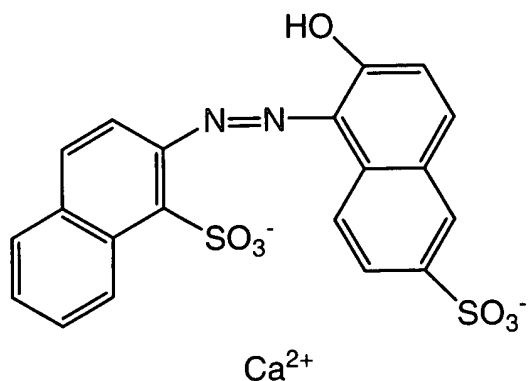
Claims 1, 4, 7, 11, 12, 15, 17, and 19-24 have been rejected under 35 U.S.C. § 112, second paragraph, with regard to the words major and minor. The terms "major amount" and "minor amount" are clearly defined in the specification at page 14, lines 21 and 22. Since the terms are clearly defined with objective parameters, they are not relative terms. One skilled in the art would readily know the metes and bounds of these terms based on the objective parameters set forth in the specification.

The Novelty Rejection

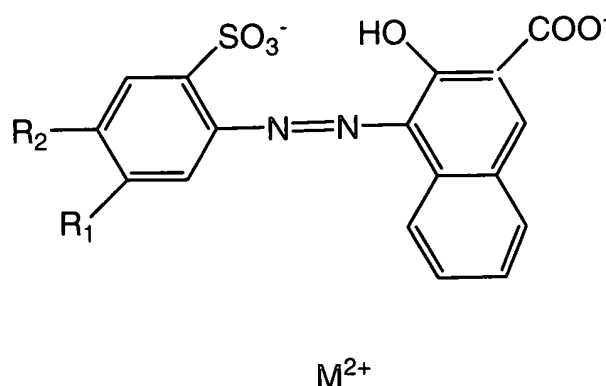
Claims 1-3, 7, 15, 16, 19, 21, and 23 have been rejected under 35 U.S.C. § 102(b) over CS 268606 to Necas et al. Necas et al describes a red, laked azo pigment with a substituted naphthalene moiety on one side of the azo group and a substituted benzene moiety on the other side of the azo group. The Examiner acknowledges that Necas et al does not recite the required Hue Angle and K/S value of the pigments of claim 1, but nevertheless contends that such would be inherent as the formulae are the same. Applicant respectfully disagrees.

To establish anticipation, each and every claim feature must be disclosed in a single cited art document. Claim 1 requires a compound with a discrete chemical structure, Hue Angle of less than 3°, and a K/S value of at least about 10. Necas et al fails to disclose, teach or suggest all three of the notable aspects of claim 1 including: 1) the required chemical structure, 2) the required Hue Angle, and 3) the required a K/S value.

For example, comparing the chemical structures of the pigment required by claim 1 and the pigment of Necas et al, it is clear that there are manifest structural differences. The chemical structures are as follows.



Claim 1



Necas et al

the first structural difference is that claim 1 has a substituted naphthalene moiety on the left side of the azo group while Necas et al has a substituted benzene moiety. The second structural difference is that claim 1 has two sulfonic acid groups while Necas et al has one sulfonic acid group and one carboxylic acid group. It is noted that in the pigment art, hue, color strength, heat stability, fade resistance, chroma and other pigment characteristics are altered/changed when there is change in any of type of ring system, identity of substituent on a given ring system, position of a substituent on a ring system, crystal structure, and identity of a metal. Due to this aspect of the pigment art, it is difficult to accurately predict what affect on pigment characteristics any given change in substituent identity or substituent position causes. Nevertheless, one skilled in the art would expect the pigment characteristics of Necas et al to be different from the pigment characteristics of the compound of claim 1 due to the structural differences.

Since Necas et al clearly fails disclose all of the features of claim 1, and since one skilled in the art would expect the pigment characteristics of Necas et al to be different from the pigment characteristics of the compound of claim 1, Necas et al cannot anticipate claims 1-3, 7, 15, 16, 19, 21, and 23.

In the event that the novelty rejection is based on Compound Registry No. 73019-25-7, which appears on the same Chemical Abstracts page printout as Necas et al, it is noted that the same arguments employed to distinguish Necas et al apply, the only

difference being that the chemical structure of Compound Registry No. 73019-25-7 is a bit closer to the structure required by claim 1, BUT the chemical structure of Compound Registry No. 73019-25-7 is also different than the structure required by claim 1. Specifically, the Compound Registry No. 73019-25-7 contains two sulfonic acid substituents on one naphthalene moiety while the other naphthalene moiety does not contain any acid groups. The compound of claim 1 requires one sulfonic acid substituent on each of the two naphthalene moieties. Moreover, in the Compound Registry No. 73019-25-7, the azo group is bonded to the naphthalene moieties at positions 4 and 1. In claim 1, the azo group is bonded to the naphthalene moieties at positions 2 and 1. Finally, Compound Registry No. 73019-25-7 fails to disclose any color for its pigment (such as red required by claim 1), as well as having the Hue Angle and K/S value required by claim 1.

In summary, by claiming 1-naphthalenesulfonic acid, 2-[(2-hydroxy-6-sulfo-1-naphthalenyl)azo] calcium salt with a specific Hue Angle and K/S value, the claims EXCLUDE and distinguish the compounds of Necas et al and Compound Registry No. 73019-25-7.

The Obviousness Rejection

Claims 4-6, 8-14, 17, 18, 20, 22, and 24 have been rejected under 35 U.S.C. § 103(a) over Hays in view of JP 58176260 and Makromol. Chem. 193,909-919. Hays relates to green shade yellow bisazo pigments, and methods of making the bisazo pigments which include the possible use of an amine oxide or sulfosuccinate surfactant, and uses for the pigments. JP'260 relates to sodium and potassium salts of azo compounds with two naphthalene moieties. Makromol describes methods of making azo dyes.

The Examiner apparently contends that it would have been obvious to use the surfactants of Hays' bisazo pigments to make the monoazo compounds of JP'260 according to Makromol, and then use the resultant compound in accordance with Hays.

Applicant respectfully disagrees because there is no teaching or suggestion to make the novel compound of claims 1 and 8.

JP'260, in the English Abstract and on page 3 of the Japanese text discloses a number of sodium and potassium salts of azo compounds that contain two substituted naphthalene moieties. However, upon close inspection, it is clear that all of the compounds described by JP'260 fall outside the scope of claims 1 and 8 for at least three reasons.

First, JP'260 only describes pigments of sodium and potassium salts whereas the claims require pigments of calcium salts. Second, the azo group of JP'260 is bonded to the naphthalene moieties at positions 4 and 1 or 1 and 1. In claims 1 and 8, the azo group is bonded to the naphthalene moieties at positions 2 and 1. Third, the positions of the sulfonic acid groups and the hydroxy group of JP'260 do NOT match the required positions of the sulfonic acid groups and the hydroxy group of claims 1 and 8. All of these structural differences lead to different pigment characteristics. Thus, while these structural differences are sufficient to distinguish JP'260 from claims 1 and 8, it is not surprising that JP'260 fails to teach or suggest azo compounds having the Hue Angle and K/S value required by claims 1 and 8.

Consequently, even if the surfactants of Hays are used to make the compounds of JP'260, the compounds of claims 1 and 8 are NOT made. Therefore, one skilled in the art would not have been motivated to make any compounds or follow any methods of claims 4-6, 8-14, 17, 18, 20, 22, and 24.

The Double Patenting Rejection

Claims 1-24 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claim 9 of co-pending application Serial No. 10/657,485 in view of Negas et al. The subject application and co-pending application Serial No. 10/657,485 are owned by the same entity, Engelhard Corporation (see Reel/Frame 014488/0232 for the subject application and Reel/Frame 014488/0240 for

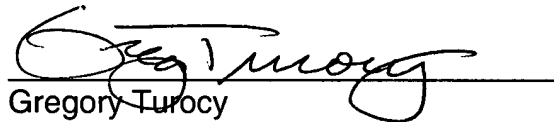
application Serial No. 10/657,485). The enclosed Terminal Disclaimer renders this rejection moot.

Should the Examiner believe that a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

In the event any fees are due in connection with the filing of this document, the Commissioner is authorized to charge those fees to our Deposit Account No. 50-1063.

Respectfully submitted,

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